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PAPER NUMBER

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APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/721,711	10/721,711 11/25/2003		Se-Yoon Kim	5000-1-482	5000-1-482 6305	
33942	7590	11/23/2005		EXAM	EXAMINER	
CHA & RE 210 ROUTE	ITER, LLC 4 EAST STE 1	NGUYEN,	NGUYEN, TUAN N			

ART UNIT

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)				
		10/721,711	KIM, SE-YOON				
	Office Action Summary	Examiner	Art Unit				
		Tuan N. Nguyen	2828				
	The MAILING DATE of this communication appears on the cover sheet with the correspondence address						
Period for Reply A SHORTENED STATI ITORY DEDICE FOR DEDICE SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS							
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).							
Status							
1)⊠	Responsive to communication(s) filed on 11/25	<u>5/2003</u> .	•				
	•—	action is non-final.					
3)[Since this application is in condition for allowance except for formal matters, prosecution as to the merits is						
	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.						
Dispositi	on of Claims						
4) Claim(s) <u>1-20</u> is/are pending in the application.							
4a) Of the above claim(s) is/are withdrawn from consideration.							
·	Claim(s) is/are allowed.						
·	Claim(s) <u>1-20</u> is/are rejected.						
	Claim(s) is/are objected to. Claim(s) are subject to restriction and/o	r election requirement					
ت(٥	are subject to restriction and/o	Gloculon requirement.					
Applicati	on Papers						
•	The specification is objected to by the Examine						
10) \boxtimes The drawing(s) filed on <u>25 November 2003</u> is/are: a) \boxtimes accepted or b) \square objected to by the Examiner.							
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.							
Priority u	under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).							
a)⊠ All b)□ Some * c)□ None of:							
1. Certified copies of the priority documents have been received.							
2. Certified copies of the priority documents have been received in Application No							
3. Copies of the certified copies of the priority documents have been received in this National Stage							
application from the International Bureau (PCT Rule 17.2(a)).							
* See the attached detailed Office action for a list of the certified copies not received.							
Attachmen		. 🗖 :					
	e of References Cited (PTO-892) te of Draftsperson's Patent Drawing Review (PTO-948)	4) Interview Summary Paper No(s)/Mail Da					
3) 🛛 Infor	mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) or No(s)/Mail Date 09/14/05:07/06/04.		atent Application (PTO-152)				

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every

feature of the invention specified in the claims to facilitate understanding of the invention.

Therefore, the planar lightwave circuit feature(s) must be shown or describe. No new matter

should be entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of 35 U.S.C. 102(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this

or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 4-7, 11, 14-17 are rejected under 35 U.S.C. 102(a) as being unpatentable over

Sidorin et al. (US 6920159).

With respect to claims 1,11 Sidorin '159 discloses a wavelength tunable laser

(ABSTRACT) having substrate (Fig 2: 210)(Col 4: 15-20) with planar lightwave circuit formed

on semiconductor substrate (Fig 1: 100, 105, laser diode and wavelength reference device, 112 &

114 – planar light waveguide) (Col 4: 20-25) so that laser output is coupled to the waveguide

where the waveguide is disposed on the substrate (Fig 1: 105, 114, 135, 150) (Col 4: 34-50,

waveguide on substrate), where a clad is surround the waveguide (Col 5: 40-50, cladding layer),

with a grating reflecting a plurality of light beams being carved into a portion of waveguide (Col

5: 40-55, cladding and DBR grating) (Fig 1: 150,125 carve on waveguide), and the

semiconductor laser mounting on the substrate as Fabry-Perot laser having plurality of

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longitudinal mode (Fig 1: 105)(Col 4: 5-10)(Col 4-5). Since claim 11 recites the same or identical elements/limitations it is inherent to use patents ('159) to recite the method of creating a wavelength-tunable laser, product by process.

With respect to claims 4, 14 Sidorin '159 shows the substrate longitudinally has two ends (Fig 2: 115, 150), and the *laser disposed at one ends* and the *circuit at the other end* (Fig 1: 100, 105 laser diode, 112 & 114 – planar light waveguide).

With respect to claims 5,6, 15,16 (Fig 1: 105, 110, 120, 150) shows the laser on the substrate is in *direct light-communication* with the waveguide *without any intervening optics*.

With respect to claims 7, 17 (Col 7: 20-27) discloses the bonding pad for applying RF to the laser.

Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness

or non-obviousness.

5. Claims 2, 3, 8-10, 12, 13, 18-20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sidorin et al. (US 6920159) in view of Sugden et al. (US 6768098).

With respect to claims 2, 9, 12, 19 Sidorin '159 discloses the above. The claims further

require that the grating is fabricated using both phase mask and amplitude mask together.

Sugden et al. '098 disclose the method of fabricating the grating using the phase-mask and

amplitude-mask together to Bragg grating (Col 2: 15-40). It would have been obvious to one of

ordinary skill in the art to provide Sidorin et al. ('159) with the method of making grating taught

or suggested by Sugden '098 for the benefit producing the desirable type of grating such as linear

grating or chirped grating.

With respect to claims 3, 10, 13, 20 Sugden et al. '098 further discloses the grating is a

moire' grating (Col 5: 5-40), for interference fiber grating fabrication method, to provide better

mode selection while improving tunable characteristic.

With respect to claims 8, 18, the claim further require the bonding pad and the laser are

wire-bonded to each other through a wire. It has been held that omission of an element in a

combination where the remaining element perform the same function as before involves only

routine skill in the art, in this case is the wire connecting between the source and the laser can be

used so circuit's layout can vary to provide component compactness. In re Karlson, 136 USPO

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Communication Information

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan N. Nguyen

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